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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,534	12/05/2003	Chien-Hsiung Chiu	03235-UPS	8292

33804 7590 07/12/2005
SUPREME PATENT SERVICES
POST OFFICE BOX 2339
SARATOGA, CA 95070

EXAMINER

PALMER, PHAN T H

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/728,534

Applicant(s)

CHIU ET AL.

Examiner

PHAN T.H. PALMER

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2003.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-41 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Phan T.H. Palmer
PHAN T. H. PALMER
PRIMARY EXAMINER

07/08/2005

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's cooperation is requested in correcting any error of which applicant may become aware in the specification.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over TU (6,219,470).

Tu reference discloses in figure 3, a wavelength division multiplexing transmitter and receiver module comprising:

- a silicon substrate (301) having a plurality of V-grooves 302(a-c), the grooves for inserting and coupling fiber optics (312), lenses 309(a-c), and filters (303),

- an optical fiber (312), inserted and coupling inside the groove (302c) of the silicon substrate (301), and optical fiber coupling to the lenses (309a-c),
- a plurality of lenses 309(a-c), inserted and coupled inside the grooves (302 a-c) of the silicon substrate (301), for coupling fiber optics, and for focusing and diverging lights, and
- at least a filter (303) inserted and coupled inside the grooves of the silicon substrate, for passing or reflecting lights with different wavelength.

With regard to claims 1 and 25, Tu reference discloses all the claimed invention, except does not disclose plurality of optical fibers.

The plurality optical fiber is obvious disclosed in the Tu reference, since the present invention and the Tu device are same a purpose: good automatic alignment, feasible in passive alignment, small size, and low in production cost.

With regard to claims 2, 3, 26, and 27, wherein the grooves are formed by etching or by precise dicing, these methods are well known in the art.

With regard to claims 4, 5, 28, and 29, wherein the grooves are V-shaped grooves and V-shaped grooves with flat bottom are disclosed in the Tu reference.

With regard to claims 6, 7, 30, and 31, wherein the grooves are U-shaped grooves, and U-shaped grooves with flat bottom, are well known in the art.

Art Unit: 2874

With regard to claims 8, 9, 32, and 34, wherein the grooves are necktie-shaped grooves or rhombus-shaped grooves, are well known in the art.

With regard to claims 10-16, wherein the lenses are ball lenses, or cylindrical lenses, or aspheric lenses, or plano-convex lenses... are well known in the art.

With regard to claims 17 and 34, wherein the lens fiber is formed by fusing micro lens and fiber optic is disclosed in the Tu reference.

With regard to claims 18-23, and 36-40, wherein the lens fiber is a conic lens, ball lens, or aspheric lens... is well known in the art.

With regard to claims 24, and 41, wherein the filter is thin-film filter, is disclosed in the Tu reference.

CONTACT INFORMATION

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHAN T.H. PALMER whose telephone number is (571) 272-2354. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RODNEY B. BOVERNICK can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2874

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PTHP
07/08/05

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